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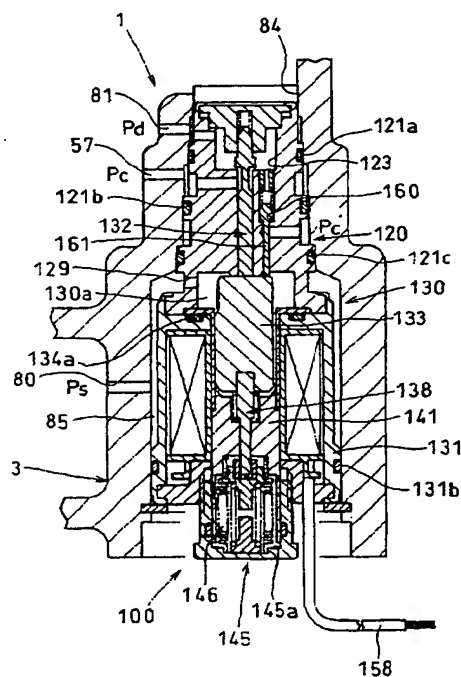
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(54) Control valve for variable capacity compressors

(57) A control valve (100) for a variable capacity compressor, which comprises a centrally arranged solenoid magnetization portion (130), a main body (120) disposed on one side of the solenoid magnetization portion, and a pressure sensitive portion (145) disposed on the other side of the solenoid magnetization portion (130). The main body (120) comprises a discharge coolant port (81) communicating with a discharge pressure region of the variable capacity compressor, a first intermediate coolant port (128) communicating with a first intermediate pressure region in the crankcase of the compressor, a suction coolant port (129) communicating with a suction pressure region, and a second intermediate coolant port (164) communicating with a second intermediate pressure region of the variable capacity compressor.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
E	EP 0 992 684 A (TGK CO LTD) 12 April 2000 (2000-04-12) * page 6, column 10, line 7-55; figures 8-13 *	1	F04B27/18
Y	US 5 702 235 A (ITO NAQYUKI ET AL) 30 December 1997 (1997-12-30) * page 9, column 4, line 4-28; figures 1,2 *	1,4	
Y,D	EP 0 919 720 A (FUJIKOKI CORP ;ZEXEL CORP (JP)) 2 June 1999 (1999-06-02) * page 6, column 9, line 50 - column 10, line 38; figure 4 *	1,4	
A	US 5 332 365 A (TAGUCHI YUKIHIKO) 26 July 1994 (1994-07-26) * abstract; figure 3 *	1-4	
A	EP 0 814 262 A (TOYODA AUTOMATIC LOOM WORKS) 29 December 1997 (1997-12-29) * abstract; figures 2,3 *	1-4	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F04B
The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 6 November 2002	Examiner Olona Laglera, C
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 00 12 0907

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The members are as contained in the European Patent Office EDP file on
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06-11-2002

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
EP 0992684	A	12-04-2000	JP	2000110731 A	18-04-2000
			JP	2001027182 A	30-01-2001
			EP	0992684 A2	12-04-2000
			US	6302656 B1	16-10-2001

US 5702235	A	30-12-1997	JP	9126124 A	13-05-1997
			AT	189042 T	15-02-2000
			DE	69606261 D1	24-02-2000
			DE	69606261 T2	08-06-2000
			EP	0771948 A1	07-05-1997
			ES	2142510 T3	16-04-2000

EP 0919720	A	02-06-1999	JP	11218078 A	10-08-1999
			EP	0919720 A2	02-06-1999
			US	6217290 B1	17-04-2001

US 5332365	A	26-07-1994	JP	5099136 A	20-04-1993
			AU	659217 B2	11-05-1995
			AU	2620792 A	08-04-1993
			CA	2080066 A1	08-04-1993
			EP	0536989 A1	14-04-1993
			US	RE35672 E	25-11-1997

EP 0814262	A	29-12-1997	JP	10002284 A	06-01-1998
			CA	2207960 A1	17-12-1997
			CN	1193695 A ,B	23-09-1998
			EP	0814262 A2	29-12-1997
			KR	215158 B1	16-08-1999
			US	6126405 A	03-10-2000

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82